



## **LUMBER, TIMBER, PILING, POSTS AND POLES FIELD SECTION 1050**

**1050.1 SCOPE.** To establish procedures for the inspection and reporting of treated and untreated lumber, timber, piling, posts, and poles.

### **1050.2 APPARATUS.**

- (a) Rule with suitable graduations to accurately measure the material to be inspected.
- (b) Increment or hollow borer in accordance with paragraph 5.95 of AWPA M2.
- (c) Core sample boxes.
- (d) Stringline.
- (e) Marking hammer.

### **1050.3 PROCEDURE.**

**1050.3.1 General.** Timber products within the state of Missouri and within 100 air miles [160 air km] of the border will be inspected by department personnel.

**1050.3.1.1** Timber products at locations other than as shown in Section 1050.3.1 of this manual are to be inspected by an approved inspection agency with the cost of inspection to be borne by the contractor in accordance with Specification Sec 1050.

### **1050.4 INSPECTION.**

**1050.4.1 Electric substation, service, and span wire assembly poles.** These items are normally accepted on the basis of visual inspection and a manufacturer's certification certifying that the material has been treated to the required final specification requirements. The certification shall be carefully checked by the inspector to insure compliance with contract requirements. In many cases, this inspection will be performed by the Resident Engineer.

#### **1050.4.2 Timber products inspected by an inspection agency.**

**1050.4.2.1** The department inspector shall examine the material and the required certifications and inspection agency's test report to ascertain compliance with the specifications. No tests are required unless deemed necessary. If tests are deemed necessary, the Division Engineer, Materials is to be consulted.

**1050.4.2.2** Each piece, where size permits, shall be legibly hammer-stamped on one or both ends as evidence of accepted material by the inspection agency.



**1050.4.2.3** The inspection agencies test report is to contain, but not limited to, the following information:

- Name of treating company
- Location of treating plant
- Applicable product specification of standard
- Charge number
- Date of treatment
- Contents of charge
  - Type of material
  - Number of pieces by size
  - Species
  - Degree of seasoning
  - Manufacturing (incised, unincised, rough surfaces, etc.)
  - Number of cubic feet [cubic meters]
- Preservative
- Process used in treatment
- Steam condition
  - Time required to reach maximum temperature
  - Time steamed at maximum temperature
  - Maximum Temperature
  - Initial vacuum period
  - Maximum vacuum
- Heating in oil
  - Heating period
  - Maximum vacuum
  - Maximum temperature
  - Total condensation
  - Total absorption of preservative
- Treatment
  - Initial air pressure
  - Initial air period
  - Pressure period
  - Maximum pressure
  - Maximum temperature
  - Average temperature
  - Maximum final vacuum
- Final vacuum period
  - Time and temperature of final steam bath (if any)
  - Time and temperature of expansion bath (if any)
  - Working tank readings with temperature
  - Injection under pressure
  - Final retention (by assay)
  - Total time of treatment
- Penetration
  - Number of borings taken
  - Percent conforming

**1050.4.3 Timber products inspected by Department personnel.**

**1050.4.3.1 Untreated Material Inspection.** Untreated wood products shall be measured and visually inspected to insure that the material complies with contract requirements. Grading and quality requirements may be found in Specification Sec 1050. It should be noted that in some cases the grading requirements are covered in the contract or by reference to other standards.



**1050.4.3.2 Treated Material Inspection.** Inspection for grading and quality in accordance with paragraph 1050.4.3.1 of this Section will be performed both before and after treatment. Inspection and sampling after treatment will be in accordance with AWP Standard M2. The basis for acceptance of treatment will be by assay test for some items. Those to be tested by assay are shown in Specification Sec 1050. Samples of preservatives are only to be taken when requested by Division Engineer, Materials. Sampling, packaging, labeling, and shipping instructions will be issued at that time.

**1050.4.3.3 Marking.** Each piece, where size permits, shall be legibly hammer-stamped on one or both ends as evidence of accepted material.

#### **1050.4.4 Inspection Agency Approval.**

**1050.4.4.1** An approved inspection agency is defined as a laboratory which has been accredited by the American Lumber Standards Committee, P. O. Box 210, Germantown, MD 20875-0210, or an experienced and qualified testing laboratory approved by the engineer.

**1050.4.4.1.1** Inspection agencies not accredited by the American Lumber Standards Committee shall submit for approval, to the Division Engineer, Materials, Missouri Department of Transportation, P.O. Box 270, Jefferson City, MO 65102, a resume of their agency which shall include a history of inspection of timber and treated products, and a listing of state highway departments for which they are performing or have performed inspection and are approved by them.

### **1050.5 REPORT.**

#### **1050.5.1 Timber products inspected by an inspection agency.**

**1050.5.1.1** Lumber, timber, piling, posts, and poles; both treated and untreated; shall be reported through SiteManager. The contractor's certification and inspection agencies inspection report, as required in Specification Sec 1050, shall be attached to the district's hard copy of the report. The report is to indicate acceptance, qualified acceptance or rejection. Appropriate remarks, as described in [General Sec 7.1.2](#) of this Manual, are to be included in the report to clarify conditions of acceptance or rejection. Distribution of reports for materials purchased under a Department purchase order is to be as described in [Field Sec 2001](#) of this Manual.

#### **1050.5.2 Timber products inspected by department personnel.**

**1050.5.2.1** If poles are accepted on the basis of manufacturer's certification by the Resident Engineer, they may be considered as reported on the "District Engineer's Certification" submitted at the end of the project. If the material is accepted by the district Operations Engineer on the basis of visual inspection and certification, the material will be reported through SiteManager. The certification shall be retained in the district office. The report is to indicate acceptance, qualified acceptance or rejection. Appropriate remarks, as described in [General Sec 7.1.2](#) of this Manual, are to be included in the report to clarify conditions of acceptance or rejection. If the material is accepted by the district Operations Engineer on the basis of inspection and tests, SiteManager shall be used to report the material showing all pertinent information. If the contractor elects to ship the material before the results of the tests on the treatment are known, he shall be informed that he is shipping at his own risk. Distribution of reports for materials purchased under a Department purchase order is to be as described in [Field Sec 2001](#) of this Manual.

